



Product Evaluation Report
ROOFHUGGER

238T 22 Ga. 18" Wide over Roof Hugger Retrofit Framing Systems

Florida Product Approval # 9352.1 R5

Florida Building Code 2020
Per Rule 61G20-3
Method: 1 -D

Category: Structural Components
Subcategory: Roof Deck
Compliance Method: 61G20-3.005(1)(d)
NON HVHZ

Product Manufacturer:

Roofhugger

P.O. Box 1027
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Engineer Evaluator:

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Florida Evaluation ANE ID: 1920

Validator:

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Compliance Statement: The product as described in this report has demonstrated compliance with the Florida Building Code 2020, Sections 1504.3.2, 1504.7.

Product Description: Retro Sub-Purlin Roof System for the purpose of re-roofing over an existing roof without removing existing panels. 238T roof panel over Roof Hugger over existing PBR roof panel.

Existing Roof Panel: Min. 26 Ga. PBR panel, 36" wide, 1 1/4" tall major rib at 12" O.C.

Roof Hugger: Standard Model C and Gusseted Model C, Min. 16 Ga., Min. 1.830" tall

Roof Hugger Spacing: 5'-0" O.C.

New Roof Panel: McElroy Metal, Inc. 238T T panel standing seam roof panel, 22 Ga. Steel, 18" wide, 22 Ga. Steel Seam Cap.

Panel Material/Standards: Material: Steel conforming to Florida Building Code 2020 Section 1507.4.3. Paint finish optional.

PBR: Min. 26 Ga. steel, 0.0185" thick

238T: Min. 22 Ga. steel, 0.030" thick

Roof Hugger: Min. 16 Ga. steel, 0.0600" thick

Corrosion Resistance: Panel Material shall comply with Florida Building Code 2020, Section 1507.4.3.

26 PBR Panel Minimum Properties:

SECTION PROPERTIES								
			NEGATIVE MOMENT			POSITIVE MOMENT		
PANEL	F _y	WEIGHT	I _{xe}	S _{xe}	Maxo	I _{xe}	S _{xe}	Maxo
GAUGE	(KSI)	(PSF)	(IN.4/FT.)	(IN.3/FT.)	(KIP-IN.)	(IN.4/FT.)	(IN.3/FT.)	(KIP-IN.)
26 (0.0185")	80	0.94	0.0305	0.051	1.6297	0.0375	0.0376	1.35

Roof Panel Clips: Fixed clip: 16 Ga. Galvanized Steel, 6" long
 Continuous Clips: 24 Ga. Steel, 0.024" thick or
 22 Ga. Steel, 0.030" thick
 Corrosion Resistance: Per Florida Building Code 2020 Section 1506.7.



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Panel/Clip Fastener: Corrosion Resistance: Per Florida Building Code 2020, Section 1507.4.4.

Substrate Description: Min. 16 Ga. Steel Framing at 5'-0" O.C. Framing must be designed for additional loads of the new roof panel and Roof Hugger system and in accordance w/ Florida Building Code 2020.

Allowable Design Uplift Pressures:

Table "A"

238T Panel Clip:	16 Ga. Fixed	24 Ga. Continuous Clip	22 Ga. Continuous Clip
Maximum Design Pressure:	-55.0 psf	-100.0 psf	-125.0 psf
Roof Hugger:	Standard Model C	Standard Model C	Gusseted Model C
Roof Hugger Spacing:	5'-0" O.C.	5'-0" O.C.	5'-0" O.C.
Roof Hugger # of Fasteners	(2) per foot	(2) per foot	(4) per foot

*Design Pressure includes a Safety Factor = 2.0.

Code Compliance: The product described herein has demonstrated compliance with The Florida Building Code 2020, Section 1504.3.2, 1504.7.

Evaluation Report Scope: The product evaluation is limited to compliance with the structural wind load requirements of the Florida Building Code 2020, as relates to Rule 61G20-3.

Performance Standards: The product described herein has demonstrated compliance with:

- ASTM E 1592-05(2012) Test method for structural performance of sheet metal roof and siding systems by uniform static air pressure difference.
- FM 4471-92 - Foot Traffic Resistance Test.



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Reference Data:

1. ASTM E 1592-01
Force Engineering & Testing, Inc. (FBC Organization # TST-5328)
Report No. 32-0466T-09A,C, E
2. FM 4471-10, Section 4.4 Foot Traffic Resistance Test
Force Engineering & Testing, Inc. (FBC Organization # TST-5328)
Report No. 90-0063T-14
3. Certificate of Independence
By Johnathan Green, P.E. (No. 88223) @ Force Engineering & Testing (FBC Organization # ANE ID: 1920)

Test Standard Equivalency:

The ASTM E 1592-01 test standard is equivalent to the ASTM E 1592-05(2012) test standard.

The FM 4471-10, Foot Traffic Resistance test standard is equivalent to the FM 4471-92, Foot Traffic Resistance test standard.

Quality Assurance Entity:

The manufacturer has established compliance of roof panel products in accordance with the Florida Building Code and Rule 61G20-3.005 (3) for manufacturing under a quality assurance program audited by an approved quality assurance entity.

Minimum Slope Range:

Minimum Slope shall comply with Florida Building Code 2020, including Section 1507.4.2 and in accordance with Manufacturers recommendations.



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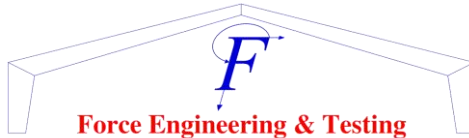
- Installation:** Install per manufacturer's recommended details.
- Insulation:** Manufacturer's approved product (Optional)
- Roof Panel Fire Classification:** Fire classification is not part of this evaluation.
- Shear Diaphragm:** Shear diaphragm values are outside the scope of this report.
- Design Procedure:** Based on the dimensions of the structure, appropriate wind loads are determined using Chapter 16 of the Florida Building Code 2020 for roof cladding wind loads. These component wind loads for roof cladding are compared to the allowable pressure listed above. The design professional shall select the appropriate erection details to reference in his drawings for proper fastener attachment to his structure and analyze the panel fasteners for pullout. Support framing must be in compliance with Florida Building Code 2020 Chapter 22 for steel, and Chapter 16 for structural loading.



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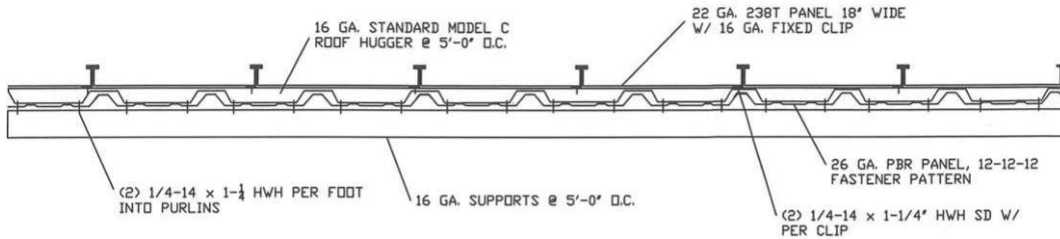
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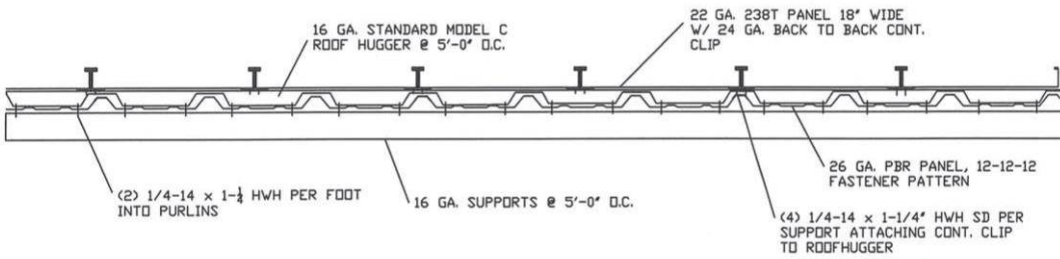


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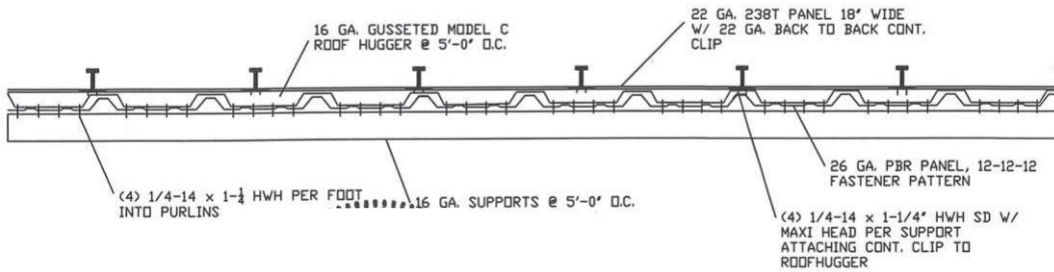
238T PANEL WITH 16 GA. FIXED CLIP



238T PANEL WITH 24 GA. CONTINUOUS CLIP



238T PANEL WITH 22 GA. CONTINUOUS CLIP



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